

ABSTRACT OF THE DISCLOSURE

A apparatus and apparatus for compensating for video insertion loss due to transmission over long twisted pair cable lines is presented. Transmission of video over twisted pair cable is advantageous because of its superior cost advantage over coaxial cable. However, twisted pair cables have significant loss characteristics at the higher frequencies (i.e., broadband) compared to coaxial cables. At a transmitter station, the video signal is amplified in the high frequency region for possible skin effect losses thereby brute forcing the high frequency components to the receiving station. At the receiver station, the video signal is further compensated for diffusion line and skin effect losses. The total skin effect compensation applied in both the transmitter and receiver stations is such that the square root of frequency characteristics of skin effect losses is compensated for. Thus, at the receiving station, the high frequency compensation added at the transmitter to brute force the high frequency components to the receiving station may be removed if found excessive.

Additionally, compensation is included to adjust for skew that may occur because of irregularities between the various twisted pairs used to transmit the individual video components. Non-minimum phase type filters are used to inject delay into the faster arriving signals so that they may coincide in phase with later arriving signals resulting in a true reproduction of the video.